

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

**WSOU INVESTMENTS, LLC d/b/a,  
BRAZOS LICENSING AND  
DEVELOPMENT**

*Plaintiff,*

**V.**

**GOOGLE LLC,**

***Defendant.***





























**Civil Case No. 6:20-cv-572-ADA**

**Civil Case No. 6:20-cv-584-ADA**

**Civil Case No. 6:20-cv-585-ADA**

## JURY TRIAL DEMANDED

**GOOGLE’S OPENING CLAIM CONSTRUCTION BRIEF**

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3	AT&T, <i>What is IPTV</i> (2009)
4	SBC, <i>Internet Update</i> (2004)
5	AT&T, <i>AT&amp;T U-Verse Timeline</i> (2006)
6	ATIS IPTV Exploratory Group, <i>Report and Recommendation to the TOPS Council</i> (July 2005)
7	International Engineering Consortium, <i>Internet Protocol Television (IPTV)</i> (2005)
8	<i>IPTV vs. Internet Television: Key Differences</i> , MasterNewMedia (June 4, 2005)
9	Eric A. Hall, <i>Internet Core Protocols: The Definitive Guide</i> (2000)
10	<i>Microsoft Press Computer Dictionary</i> (3d ed. 1997)
11	<i>Newton’s Telecom Dictionary</i> (17th ed. 2001)
12	<i>A Dictionary of the Internet</i> (2001)
13	Information Sciences Institute, <i>Internet Protocol: DARPA Internet Program Protocol Specification</i> (Sept. 1981)
14	<i>Newton’s Telecom Dictionary</i> (20th ed. 2004)
15	ATIS, <i>2005 ATIS Annual Report</i> (May 25, 2006)
16	WIPRO, <i>Network Infrastructure for IPTV</i> (Jan. 24, 2006)
17	International Telecommunication Union, <i>IPTV Delivery Architecture</i> (Oct. 2, 2006)
18	Wes Simpson & Howard Greenfield, <i>IPTV and Internet Video</i> (2007)
19	Wes Simpson, <i>Video Over IP</i> (2nd ed. 2008)
20	Geng Yu et al., <i>Analysis and Characterization of IPTV User Behavior</i> , Lund University (2009)
21	Mung Chiang, <i>Networked Life</i> (2012)
22	Mung Chiang, <i>Which Way to Watch Video on the Internet? – IPTV and VOI</i> , Coursera (landing page)
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28	<i>New Oxford American Dictionary</i> (3d ed. 2010)
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**TABLE OF ABBREVIATIONS**

<b>Abbreviation</b>	<b>Description</b>
WSOU	Plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development
Google	Defendant Google LLC
'806 patent	U.S. Patent No. 8,041,806
'961 patent	U.S. Patent No. 8,737,961
'697 patent	U.S. Patent No. 8,803,697

*\* Emphasis added unless otherwise indicated.*

*\*\* Element notation is omitted from quotations of the patents' disclosures unless otherwise indicated.*

**I. U.S. PATENT NO. 8,041,806 (CASE NO. 6:20-CV-572-ADA)**

The '806 patent relates to the “control of electronic content delivery to subscribers in communication networks based on subscriber behaviors.” -572 Case, Dkt. 1-1 (1:7-10).

**“Internet Protocol Television (IPTV) service” (claim 1)**

Google’s Construction	WSOU’s Construction
“An internet service provider (ISP) service that delivers television content to subscribers over a private, managed Internet Protocol (IP) network connection”	Plain and ordinary meaning

*The Term “Internet Protocol Television (IPTV) Service” Requires Construction.* The asserted claims recite an “access network comprising an electronic content source that is operable to deliver the accessed electronic content to the subscriber” and “*provides an Internet Protocol Television (IPTV) service.*” -572 Case, Dkt. 1-1 (claim 1).<sup>1</sup> As of the filing date of the application for the '806 patent (September 2006), the plain and ordinary meaning of the term “Internet Protocol Television (IPTV) service” was “an internet service provider (ISP) service that delivers television content to subscribers over a private, managed Internet Protocol (IP) network connection.” This construction follows directly from contemporaneous, objective extrinsic sources and is confirmed by the '806 patent specification.

WSOU contends that “IPTV service” should be given its “plain and ordinary meaning.” But the plain and ordinary meaning of “IPTV” at the filing date of the '806 patent was narrower than how the term may be used today. Ex. 1 (Simpson Decl.) ¶¶ 36-39. Construction of the term “IPTV service” is therefore essential to assist the jury because, “when a claim term understood to have a narrow meaning when the application is filed later acquires a broader definition, the literal

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<sup>1</sup> WSOU now asserts claims 2, 3, 5 and 7, which depend from claim 1.

scope of the term *is limited to what it was understood to mean at the time of filing.*” *Kopykake Entps., Inc. v. Lucks Co.*, 264 F.3d 1377, 1383 (Fed. Cir. 2001); *see also Helmsderfer v. Bobrick Washroom Equip. Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2018) (“[A] court must determine the meaning of any disputed words from the perspective of one of ordinary skill in the pertinent art *at the time of filing.*”). When “the ‘ordinary’ meaning ... does not resolve the parties’ dispute,” claim construction is necessary “to determine what claim scope is appropriate in the context of the patents-in-suit.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008). Google’s construction provides the appropriate scope.

***Objective, Contemporaneous Extrinsic Evidence Establishes That Google’s Construction Is The Plain And Ordinary Meaning Of “IPTV” As Of The Filing Date.*** Before the ’806 patent’s filing date and during its prosecution, the telecommunications industry, academic institutions, standards bodies, and skilled artisans understood the term “IPTV” to mean an ISP service that delivers television content to subscribers over a private, managed Internet Protocol (IP) network connection. Ex. 1 (Simpson Decl.) ¶¶ 40-51.

While the “IP” in the term “IPTV” stands for “Internet Protocol,” “IP” is not synonymous with nor exclusive to the public Internet. Rather, “IP” is a set of standards for formatting and transporting data across networks that use data packets for communication, including both public networks (such as the Internet) and private networks. *Id.* ¶ 38; Ex. 3 at -449, Ex. 10 at -249, Ex. 12 at -379, Ex. 13 at -391, Ex. 18 at - 554, Ex. 19 at -76127. Likewise, the term “IPTV” did not mean television content transmitted over the public Internet; rather, the term meant television content transmitted over private, managed IP networks. Ex. 1 (Simpson Decl.) ¶¶ 39-51. For example, in 2005, the president of Alcatel, the original assignee of the ’806 patent, authored an article titled “The Real Meaning of IPTV” published in BusinessWeek, and drew a clear



distinction between IPTV and public Internet television by highlighting the differences in the networks used by each technology:

Let's start with what IPTV is not. *Specifically, it is not TV that is broadcast over the Internet.* While the "IP" in its name stands for Internet protocol, that doesn't mean people will log onto their favorite Web page to access television programming. *The IP refers to a method of sending information over a secure, tightly managed network that results in a superior entertainment experience.*

Ex. 2 at -506; *see also* Ex. 1 (Simpson Decl.) ¶ 43.

Alcatel's explanation is fully consistent with how Internet Service Providers (ISPs) described IPTV services around the filing date of '806 patent. For example, AT&T developed and launched its IPTV service "U-Verse" in the 2004–2006 timeframe, describing IPTV as follows:

#### **Internet Protocol**

Think of Internet Protocol as a "language" that devices use to communicate over a computer network. *IP is not the same thing as the Internet.* Rather, it's the same language used by the Internet. IP technology allows information to be sent and received over any broadband or network connection.

\* \* \*

#### **How IPTV is Different Than Internet Video**

*Watching U-verse TV is different than streaming videos over the public Internet. With U-verse TV, programming is carried over our managed network, which allows us to control video quality and the reliability of your service.* Best-effort Internet video can be subject to delays due to lower bandwidth, high traffic or poor connection quality.

Ex. 3 at -449; *see also* Ex. 4 at -326; Ex. 5 at -372-373; Ex. 18 at -554; Ex. 1 (Simpson Decl.) ¶ 42.

Before the filing date of the '806 patent, standardization bodies including the Alliance for Telecommunications Industry Solutions (ATIS), where Alcatel (original '806 patent assignee) was a member, also described IPTV with reference to its private and tightly-managed network:

*IPTV is defined as the secure and reliable delivery to subscribers of entertainment video and related services.* These services may include, for example, Live TV,

Video On Demand (VOD) and Interactive TV (iTV). *These services are delivered across an access agnostic, packet switched network that employs the IP protocol to transport the audio, video and control signals. In contrast to video over the public Internet, with IPTV deployments, network security and performance are tightly managed to ensure a superior entertainment experience, resulting in a compelling business environment for content providers, advertisers and customers alike.*

\* \* \*

*Today, the term IPTV does not encompass [a]ny video services originating from the public Internet.*

Ex. 6 at -330, -333-335; Ex. 15 at -274, -276, -278, -279, -284, -318, -320; Ex. 1 (Simpson Decl.)

¶¶ 46-47.

In 2005, academic engineering institutions, including the International Engineering Consortium, likewise defined IPTV in terms of its closed, proprietary network:

*IPTV is a system used to deliver digital television services to the consumers who are registered subscribers for this system. This delivery of digital television is made possible by using Internet Protocol over a broadband connection, usually in a managed network rather than the public Internet to preserve quality of service guarantees.*

\* \* \*

*It is important to remember that IPTV is not like any ordinary television system broadcast through the Internet, but rather is unique in itself. Its contour is represented by a closed, proprietary TV system which is similar to the cable services present today. But, in contrast, the delivery of IPTV is made via IP-based secure channels, which result in a sharp increase in content distribution control.*

\* \* \*

Moreover, one must also remember that *IPTV is noticeably different from “Internet Video”*. Internet Video provides services to watch videos, such as movie previews and web-cams. This service is a so-called “best effort” by providers of the Internet, which has no back-to-back service management along with quality of service considerations.

Ex. 7 at -75803; *see also* Ex. 1 (Simpson Decl.) ¶ 44.

Similarly, other contemporaneous technical sources described IPTV with reference to its closed, proprietary, managed network. For example, Master New Media magazine explained that:

*IPTV is represented by a profile of closed, proprietary TV systems such as those present today on cable services but delivered via IP-based secure channels representing a sharp increase in control of content distribution.*

\* \* \*

*IPTV is not TV that is broadcast over the Internet.*

\* \* \*

*IP-TV is a carrier-led and controlled platform. There is a physical carrier that has physical pipes and infrastructure that it operates and controls. The consumer interacts directly with that operator/carrier.*

*As such this is an end-to-end system or semi-closed network (infrastructure is all within the carrier environment, and cannot be normally accessed to the Internet as a whole. Further to this, the deployment infrastructure and devices to access it are all managed and operated by the IP-TV carrier).*

Ex. 8 at -439-440; *see also* Ex. 1 (Simpson Decl.) ¶ 45.

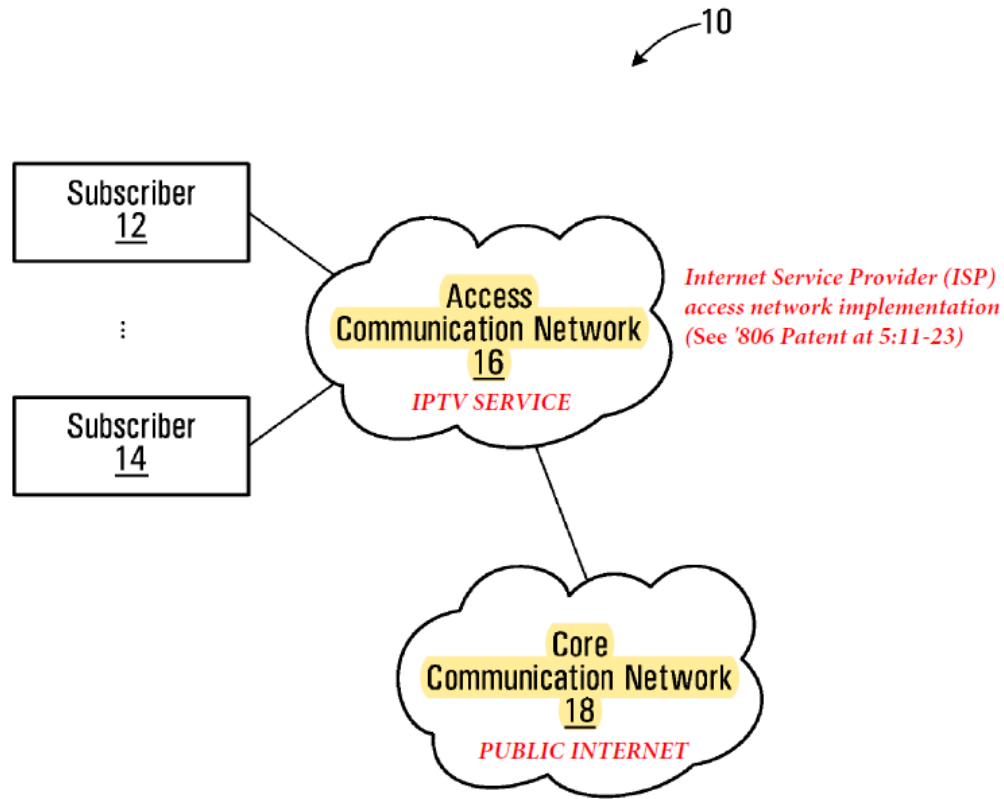
In sum, contemporaneous extrinsic evidence uniformly establishes that the plain and ordinary meaning of IPTV, at the time of the filing date of the '806 patent, was “an internet service provider (ISP) service that delivers television content to subscribers over a private, managed Internet Protocol (IP) network connection.”

Further, Google’s construction is consistent with other tribunals’ constructions of “IPTV.” For example, the ITC construed “IPTV delivery system” as a “television system that transmits digital video over *closed, proprietary broadband connections employing Internet protocols.*” *Certain Digital Set-Top Boxes and Systems*, Inv. No. 337-TA-1315, 2022 WL 4465560, at \*35-\*38 (U.S.I.T.C. Sept. 22, 2022) (construing term in patent with an effective filing date of June 2007). Similarly, the PTAB construed the term “Internet Protocol TV (IPTV)

system” to mean “a system that provides digital television services *over closed, proprietary broadband connections employing TCP/IP data transport protocol.*” *Dish Network L.L.C. v. Broadband Itv, Inc.*, IPR2020-01267, 2021 WL 220200, at \*15 (P.T.A.B. Jan. 21, 2021) (construing patent with an effective filing date of July 2004).

***The Specification Underscores That Google’s Construction Reflects The Plain And Ordinary Meaning At The Time Of Filing.*** Google’s construction is confirmed by the entirety of the intrinsic record.

First, the claims and specification confirm that the claimed IPTV service is provided within a private, managed IP network. The claim language recites an “*access network comprising an electronic content source*” which “*provides an Internet Protocol Television (IPTV) service.*” -572 Case, Dkt. 1-1 (claim 1). The specification states that an Internet Service Provider (ISP) implements the “access network” providing the IPTV service, and distinguishes the private “access network” from the public Internet (the “core communication network”). In particular, referring to Figure 1 (annotated below), the specification explains that (1) the ISP “*implements switches, routers, and/or other network equipment as the access communication network 16 to provide its subscribers with access to the Internet as the core communication network 18*” and (2) “*within the access communication network 16, ... an ISP provides an Internet Protocol TV (IPTV) service as a source of electronic content.*” *Id.* (5:11-21).

**FIG. 1**

Moreover, Figure 2’s “access network 24” (which is a more detailed implementation of Figure 1’s “access communication network 16” (*id.* (4:46-54, 5:30-35)) includes a subscriber management element (SME) that “is implemented in a Remote Access Server (*RAS*), a Broadband *RAS* (*BRAS*), or a set of routers and/or switches with subscriber management functions that acts as a distributed *BRAS*.” *Id.* (6:29-32, 8:4-13). A *RAS* is a server that connects remote users to an organization’s internal local area network (*LAN*) or to an *ISP*’s network, both of which skilled artisans would understand to be private, managed networks. Ex. 10 at -250; Ex. 11 at -272; Ex. 12 at -380; *see also* Ex. 1 (Simpson Decl.) ¶ 56. Skilled

artisans would understand these disclosures to mean that the claimed IPTV service is provided within a proprietary (i.e., private) network that is implemented and managed by an ISP. Ex. 1 (Simpson Decl.) ¶¶ 52-57.

Second, the specification establishes that the IPTV service is an ISP-provided source of electronic content. As mentioned above, the '806 patent explains that “*within the access communication network 16, ... an ISP provides an Internet Protocol TV (IPTV) service as a source of electronic content.*” -572 Case, Dkt. 1-1 (5:17-23). Referring to Figure 2, the '806 patent explains that when an ISP “*host[s] its own IPTV service,*” this service is the type of electronic content source that would be “*implemented within the access network 24,*” unlike “electronic content publisher[s] such as a traditional portal (webpage), a video content provider, etc.” that are “external from an access network.” *Id.* (7:39-49). Skilled artisans would understand these disclosures to mean that the claimed IPTV service is hosted, and thus provided, by an ISP, consistent with IPTV implementations as of the filing date of the '806 patent. Ex. 1 (Simpson Decl.) ¶¶ 52-57.

Third, skilled artisans would understand that the claimed “IPTV service” is provided *to subscribers*. As of the '806 patent's filing date, it was clear that an IPTV service offers television content to subscribers. Exs. 2-8, 10, 16-19, 21-23; Ex. 1 (Simpson Decl.) ¶¶ 41-51. Consistent with this, the entire thrust of the '806 patent is to provide “electronic content” to “subscribers,” and both the claims and the specification identify the IPTV service as a source of electronic content. For example, the claims recite an “access network comprising an *electronic content source* that is operable to *deliver the accessed electronic content to the subscriber*” and “*the electronic content source provides an Internet Protocol Television (IPTV) service.*” -572 Case, Dkt. 1-1 (Claim 1). Also, as mentioned above, the specification explains that “within the

access communication network 16... *an ISP provides an Internet Protocol TV (IPTV) service as a source of electronic content.*” *Id.* (5:19-21); *see also id.* (7:42-44); Ex. 1 (Simpson Decl.) ¶ 54. Further, the ’806 patent discloses that “[t]he subscriber 22 is in some embodiments an Internet service subscriber, or more generally *a subscriber to a service offered by the access network 24.*” *Id.* (7:27-29); *see also* Ex. 1 (Simpson Decl.) ¶ 55. As shown in the claims, specification, and discussion above, the claimed “Internet Protocol Television (IPTV) *service*” is “a *service* offered by the access network 24.” -572 Case, Dkt. 1-1 (Claim 1, 5:19-21, 7:42-44).

In sum, the ’806 patent demonstrates the claimed IPTV service is provided within an “access network” that is a private, ISP-managed network because: (i) the ISP implemented the “access network” to provide its subscribers with electronic content (including an IPTV service) and access to the public Internet (the “core communication network”); and (ii) the ISP restricts access to the “access network” to subscribers. Ex. 1 (Simpson Decl.) ¶¶ 52-57.

\* \* \*

Consistent with applicable precedent, Google’s construction sets forth the plain and ordinary meaning of the term “IPTV service,” as understood at the time of the filing of the ’806 patent. This construction is based on objective, contemporaneous extrinsic evidence and confirmed by the intrinsic evidence.

## **II. U.S. PATENT NO. 8,737,961 (CASE NO. 6:20-CV-585-ADA)**

The ’961 patent generally describes deriving a context for a mobile device user such as “‘work’ or ‘lunch’ or ‘recreation’” in order to deliver a service, “such as a marketing service that provides restaurant coupons to a user going to lunch in the vicinity of a subscribing restaurant.” -585 Case, Dkt. 1-1 (1:24-26, 7:65-67). The specification describes “incrementally learn[ing] the location states by constantly monitoring the signal environment of the mobile device” in an effort to continuously learn and improve localization of a mobile device. *Id.* (4:28-30). The asserted

claims disclose a method and apparatus for performing this incremental determination of location context.

**A. “incrementing of a count for a stationary state associated with the set of one or more distinct signal sources at the current time” (claims 1, 11)**

Google’s Construction	WSOU’s Construction
Indefinite	Plain and ordinary meaning

***The Term “Incrementing Of A Count For A Stationary State Associated With The Set Of One Or More Distinct Signal Sources At The Current Time” Is Indefinite.*** The term is indefinite both because it is a “moving target” with no fixed meaning, *Icon Health & Fitness, Inc. v. Polar Electro Oy*, 656 F. App’x 1008, 1016 (Fed. Cir. 2016), and because its competing interpretations render its elements “merely superfluous,” *Bicon Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006).

During the prior *Markman* proceedings, Google argued that the term “stationary state” was indefinite. Google also contended that the phrase “incrementing of a count” required construction to clarify that the term represents time or duration at a particular “stationary state” in order to avoid disputes about the scope of “plain and ordinary meaning” of this term. -585 Case, Dkt. 39 at 9-14. This Court preliminarily adopted WSOU’s proposal and construed both terms as “plain and ordinary meaning”; the parties did not argue those terms during the *Markman* hearing.

As Google anticipated, WSOU now attempts to abuse the ambiguity of its “plain and ordinary meaning” construction by treating this limitation as having different meanings in different contexts and eliminating language recited in the claim. That is contrary to the basic rule that claim terms must have “a fixed, unambiguous, legally operative meaning.” *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1377 (Fed. Cir. 2005). Accordingly, claim terms are indefinite



when they are “moving target[s]” with varying scope and meaning in different contexts and circumstances. *Icon Health & Fitness*, 656 F. App’x at 1016. That is precisely the case here.

WSOU’s Amended Final Infringement Contentions served on August 3, 2022 confirm that the term “incrementing of a count for a stationary state associated with the set of one or more distinct signal sources at the current time” is indefinite because it has no fixed “plain and ordinary meaning.” Rather, WSOU uses “plain and ordinary meaning” as a fluid catchall to sweep in four competing and mutually inconsistent interpretations of (a) what is “count[ed]” and (b) when that “count” takes place in effort to accuse four different features of multiple different accused products:

1. The aggregate *number of multiple mobile devices* at a particular location *at any point in time*;
2. The *number of times a particular advertisement was shown in a geographic area* across all mobile devices for *some past period of time*;
3. The number of times *in its history* that a single mobile device has visited an area; and
4. *Movement* of a single mobile device, such as an estimate of steps or distance, at some undefined point in time.

WSOU thus contends that the “plain meaning” of this term is not fixed and includes *any* data collecting related to any number of devices at any time.

Moreover, this expansive interpretation of the “plain meaning” entirely reads out the claim language reciting “for a *stationary state associated with the set of one or more distinct signal sources at the current time*.” But “[a]llowing a patentee to argue that ... characteristics specifically described in a claim are merely superfluous would render the scope of the patent ambiguous, leaving ... the public to guess about which claim language the drafter deems necessary to his claimed invention and which language is merely superfluous, nonlimiting elaboration.” *Bicon*, 441 F.3d at 950. The “plain and ordinary meaning” construction advanced

by WSOU “undermine[s] the notice function of the claims” and “allow[s] [the patentee] to benefit from the ambiguity, rather than requiring [the patentee] to give proper notice of the scope of the claims to competitors.” *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1254 (Fed. Cir. 2008). Accordingly, this claim limitation is indefinite.

WSOU’s Amended Final Infringement Contentions demonstrate that the “plain and ordinary” it advocates here has no fixed meaning whatsoever and vitiates claim elements:

**WSOU’s “Plain Meaning” No. 1:** WSOU contends this limitation encompasses estimating the aggregate *number of multiple mobile devices* at a particular location *at any point in time*. WSOU asserts that the Popular Times feature of Google Maps “display[s] information regarding how busy one can expect a business to be during certain times of the day” by “increment[ing] a count, e.g., of the number of customers at a particular business location for a certain time.” -585 Case, Dkt. 111-9 at 56, 59. WSOU’s contentions incorporate a Google Help page explaining: “To determine popular times . . . Google uses aggregated and anonymized data” indicating “average popularity over the last few months.” *Id.* at 61. In short, WSOU contends that the “plain meaning” of “incrementing of a count for a stationary state associated with the set of one or more distinct signal sources at the current time” encompasses displaying aggregated and anonymized data regarding the number of mobile devices that have visited, or are visiting, a location at any point in time. The claim, however, relates to identifying and counting “stationary states” of a single mobile device based on data *that particular device receives* from distinct signal sources *at the current time*, so the “count” must be related to the location of the single mobile device receiving the data, and it must be based on the data received by that single device at the current time. The “plain and ordinary meaning” applied by WSOU in the context

of the Popular Times feature of Google Maps vitiates those claim limitations, and renders the claim indefinite.

**WSOU’s “Plain Meaning” No. 2:** WSOU contends this limitation encompasses the *number of times a particular advertisement was shown in a geographic area across all mobile devices for some past period of time*. Applying this meaning, WSOU asserts that “Google Ads also tracks data and increments counters for stationary states associated with particular geographic locations.” -585 Case, Dkt. 111-9 at 63. WSOU’s contentions identify Google Help pages about Google Ads Locations Reports explaining that for location-targeted ads, Locations Reports can display “performance based on the locations you targeted.” *Id.* at 65. These reports that WSOU contends “increment a count” show the total number of times that a specific ad was shown across all devices, which are called ad “impressions.” WSOU states that “Google Ads determines a primary set of stationary states (e.g., how many impressions a particular ad was displayed to users in a geographic area) such that it allows Google Ads customers to view and analyze metrics and data about ad campaigns.” *Id.* at 83. WSOU appears to point to the total number of ad impressions as the “count” being “incremented,” which is different from the number of mobile devices in a location “counted” in “Plain Meaning” No. 1, but still does not relate to a “stationary state” of the mobile device receiving the set of data signals. Additionally, the count here is entirely historic. This second plain meaning is inconsistent with the first, thereby rendering the claim indefinite. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014) (POSITA must be informed “about the scope of the invention with reasonable certainty.”). It similarly renders the claim indefinite by reading out the claim language requiring that the count must be “*for a stationary state associated with the set of one or more distinct signal sources at the current time.*” *See id.*

**WSOU’s “Plain Meaning” No. 3:** WSOU contends this limitation encompasses the number of times *in its history* that a single mobile device has visited an area. WSOU asserts that “Google Timeline ... will increment a count for a stationary state associated with the geographic location of a mobile device, e.g., a counter tracking how often a mobile device is in a particular area.” -585 Case, Dkt. 111-9 at 62. The only evidence WSOU cites to explain this allegation is a Google Help page which states: “When you confirm your location [in Google Timeline], it can help you remember how many times you’ve been to the area.” *Google Maps Timeline*, Google Maps Help, <https://support.google.com/maps/answer/6258979> (last visited Nov. 16, 2022); *see also* -585 Case, Dkt. 111-9 at 62 (citing *id.*). This third interpretation further renders the scope of the claim indefinite by “counting” something entirely different from the first two: here, how often a single mobile device has already visited a location.

**WSOU’s “Plain Meaning” No. 4:** WSOU contends this limitation encompasses counting *movement* of a mobile device, such as an estimate of steps or distance covered, at some undefined point in time. For its accusations regarding Awareness API, WSOU asserts that “when a user’s stationary state (i.e. with[in a] geofencing region) is determined, the application can incrementally count data for other context sets (e.g. step counting, distance covered, etc.).” -585 Case, Dkt. 111-9 at 71. Here, WSOU claims that what is being “counted” is the number of steps a user takes at some undefined point in time—that is far afield from the number of mobile devices at a location (“Plain Meaning” No. 1), the number of ad impressions shown in a particular location (“Plain Meaning” No. 2), or the location history of a single device (“Plain Meaning” No. 3), and completely divorced from the claim language requiring that the “count” be “for a stationary state associated with the set of one or more distinct signal sources *at the current time*.” Again, WSOU’s multitude of “plain meanings” render the scope of the claim ambiguous.

WSOU’s four widely varying and fundamentally different “plain meanings” for this limitation are irreconcilable. Per WSOU’s contentions, after determining that “the mobile device [is] not moving outside” an area, the requirement of “incrementing of a count for a stationary state associated with the set of one or more distinct signal sources at the current time” has no bounds and can encompass any number anywhere, including (1) the aggregate number of mobile devices at a location at any point in time; (2) the number of times a particular advertisement was shown in a geographic area across all mobile devices for some past period of time; (3) the number of times in its history that a single mobile device has visited an area; and even (4) movement of a single mobile device, such as an estimate of steps or distance, at some undefined point in time . The claim requirement encompasses this wide array of numbers without regard to “the mobile device” receiving the data from the distinct set of signal sources, or the “stationary state” that must be associated with that set of signal sources “at the current time,” which the claim language requires. WSOU’s “plain and ordinary meaning” interpretations not only vitiate claim elements, they also demonstrate that this term is a moving target. This term is indefinite. *See Bicon*, 441 F.3d at 950; *Icon Health & Fitness*, 656 F. App’x at 1016.

**B. “the set of wireless transmitters” (claim 3)**

Google’s Construction	WSOU’s Construction
Indefinite	Plain and ordinary meaning

***The Claims Provide No Antecedent Basis For “The Set Of Wireless Transmitters”***

***Limitation.*** Claim 3 lacks antecedent basis and is therefore indefinite. Claim 3 includes the step of “determining a conditional probability for *each* wireless transmitter of *the set* of wireless transmitters given an extant stationary state,” but neither claim 1 nor the specification explain or even refer to a “set of wireless transmitters.” Instead any reference to “set of wireless

transmitters” appears for the first time in dependent claim 3. A skilled artisan would be unable to determine with reasonable certainty for which wireless transmitters—“each”—she must perform this “determining” step, rendering the claim indefinite.

Claim 1 recites a method as follows:

A method comprising: causing at least in part a receiving of signal data that indicates a set of one or more distinct signal sources from which signals are received at a mobile device for each of a plurality of different times;

determining whether the mobile device is moving outside a specified area at a current time of the plurality of different times based on the signal data;

if the mobile device is determined to be not moving outside the specified area, then causing at least in part an incrementing of a count for a stationary state associated with the set of one or more distinct signal sources at the current time;

determining a primary set of stationary states, each stationary state in the primary set associated with a frequently incremented count for one or more similar sets of one or more distinct signal sources when the mobile device is not moving outside the specified area and

causing at least in part initiation of delivery of a service to the mobile device based on the stationary state.

-585 Case, Dkt. 1-1 (37:5-24). Claim 3 depends on claim 1, and recites the further steps of:

wherein incrementing the count for the stationary state further comprises:

determining a conditional probability for *each wireless transmitter of the set of wireless transmitters* given an extant stationary state;

determining a conditional probability for the extant stationary state given the set of one or more distinct signal sources based on the conditional probability for each wireless transmitter of the set of wireless transmitters given the extant stationary state; and

updating a count of the extant stationary state if the conditional probability for the extant state given the set of one or more distinct signal sources is greater than a cluster threshold.

*Id.* (37:32-45). Claim 1 does not contain the terms “wireless” or “transmitter,” let alone define any “set of wireless transmitters.”

The patentee’s “use of the article ‘the’ rather than ‘a’ is significant.” *Digital Retail Apps, Inc. v. H-E-B, LP*, No. 19-cv-167, 2020 WL 376664, at \*12 n.6 (W.D. Tex. Jan. 23, 2020) (citing

MPEP § 2173.05(3) (9th ed. Jan. 2018)). The inventors understood how to provide proper antecedent basis: claim 1 recites “a set of one or more distinct signal sources,” and claim 3 refers back to “the set of one or more distinct signal sources.” -585 Case, Dkt. 1-1 (37:7; 37:43-44). But the claims provide no antecedent basis for “the set of wireless transmitters,” rendering the term indefinite. *See, e.g., In re Downing*, 754 Fed. App’x 988, 996 (Fed. Cir. 2018) (citing *In re Packard*, 751 F.3d 1307, 1310, 1314 (Fed. Cir. 2014)); *Bushnell Hawthorne, LLC v. Cisco Sys., Inc.*, No. 18-cv-760, 2019 WL 2745735, at \*3 (E.D. Va. July 1, 2019), *aff’d*, 813 F. App’x 522 (Fed. Cir. 2020).

***Without Reasonably Certain Parameters For “The Set Of Wireless Transmitters,” A Skilled Artisan Cannot Determine An Identifiable “Set” Of Wireless Transmitters On Which To Perform The First “Determining” Step In Claim 3.*** The first “determining” step of claim 3 requires “determining a conditional probability for *each* wireless transmitter of the set of wireless transmitters given an extant stationary state.” -585 Case, Dkt. 1-1 (37:34-36). “‘Each’ indicates there is a set with potentially multiple members, and that each of these potential members of the set has defined characteristics.” *KEYnetik, Inc. v. Samsung Elecs. Co.*, 841 F. App’x 219, 224 (Fed. Cir. 2021). “The word ‘set’ can mean ‘[a]n assemblage of distinct entities, either individually specified or which satisfy certain specified conditions.’” *Id.* (alterations in original). Before a skilled artisan can determine whether a system “determin[es] a conditional probability for each wireless transmitter of the set of wireless transmitters,” -585 Case, Dkt. 1-1 (37:34-35), she must know with precision which wireless transmitters are contained in “the set” of wireless transmitters—that is, what “assemblage of distinct entities, either individually specified or which satisfy certain specified conditions” comprise the inclusive list. *KEYnetik*, 841 F. App’x 219 at 224. Without this understanding, it would be impossible to know whether

she determined a probability as to “each” of the members of that set, as required by the claim. But the claim fails to instruct a skilled artisan how to define “the set of wireless transmitters,” and thus “does not provide a reasonably clear and exclusive definition” of the term. *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1373 (Fed. Cir. 2014); *see Infinity Comput. Prods., Inc. v. Oki Data Ams., Inc.*, 987 F.3d 1053, 1062 (Fed. Cir. 2021).

***The Specification Fails To Fill The Gap In The Claims To Provide Support Or Antecedent Basis For “The Set Of Wireless Transmitters.”*** The specification not only fails to fill the gap; it confirms that the claim is indefinite. Throughout the specification, the inventors use the term “wireless transmitter” to refer to known types of wireless transmitters at the time, including at least “GSM cell identifiers,” “WiFi access point identifiers,” and “Bluetooth or other ad-hoc networks.” -585 Case, Dkt. 1-1 (6:38-39, 9:34-35). The inventors note that not all wireless transmitters are the same: they may be “stationary or non-stationary transmitters.” *Id.* (9:29-30). A “stationary wireless transmitter” is one that “persists in one location for an extended period of time that is long compared to the time for determining the location context of a mobile terminal,” allowing reasonable confidence in its location, while a “non-stationary transmitter (e.g., Bluetooth) involves a step to localize these transmitters.” *Id.* (6:2-7, 9:29-31). But the specification provides no definition or parameters to define “the set of wireless transmitters” from which a skilled artisan must “determin[e] a conditional probability for *each* wireless transmitter.” *Id.* (37:34-35). A skilled artisan would accordingly be unable to recognize with reasonable certainty *which* wireless transmitters must receive conditional probability determinations to meet claim 3. Is a probability required for “each” visible GSM cell identifier? “Each” visible WiFi access point? “Each” visible Bluetooth transmitter? Are both stationary and non-stationary transmitters included in the “set?” The patent does not say. Claim 3 is thus



“indefinite because the meaning of the recited ‘set[] [of wireless transmitters]’ is not reasonabl[y] ascertainable in the light of the intrinsic evidence.” *Sol IP, LLC v. AT&T Mobility LLC*, No. 18-0526, 2020 WL 60141, at \*11 (E.D. Tex. Jan. 6, 2020); *see WAPP Tech Ltd. P’ship v. Bank of Am., N.A.*, No. 21-670, 2022 WL 2463569, at \*20 (E.D. Tex. July 6, 2022).

### III. U.S. PATENT NO. 8,803,697 (CASE NO. 6:20-CV-584-ADA)

The ’697 patent generally claims a mobile communications device having a radar functionality to detect movement of an external object. -584 Case, Dkt. 1-1 (1:7-10; 4:18-20; 9:50-12:22).

#### “mobile communications device” (all claims)

Google’s Construction	WSOU’s Construction
“a portable device that can communicate while it is moving”	Plain and ordinary meaning

***The Term “Mobile Communications Device” Requires Construction.*** The asserted claims recites “detecting by the *mobile communications device*, using radar, movement of an external object,” -584 Case, Dkt. 1-1 (claim 1), and “a radar equipped *mobile communications device* configured to detect movement.” *Id.* (claim 13). Google’s construction reflects the plain and ordinary meaning of “mobile communications device” as established by the intrinsic evidence and contemporaneous dictionaries. WSOU does not construe the term, instead stating “plain and ordinary meaning.” WSOU’s amended complaint and amended infringement contentions, however, assert that the claimed “mobile communications device” encompasses fixed table-top devices (like corded displays) and anchored, wall-mounted devices (like thermostats). *See* -584 Case, Dkt. 108 ¶¶ 54-76. Accordingly, the parties clearly dispute the scope of the “plain and ordinary meaning.” In these circumstances, “when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute,” “claim construction requires the court

to determine what claim scope is appropriate in the context of the patents-in-suit.” *O2 Micro*, 521 F.3d at 1361. Indeed, in *Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314 (Fed. Cir. 2016), the Federal Circuit held that it was error to rely solely on “plain and ordinary meaning” rather than construe the terms “portable” and “mobile,” when the parties disputed the scope of the terms and the patentee accused devices that were wall-mounted and wired. *Id.* at 1319-23.

***The Specification Uniformly Supports Google’s Construction.*** The plain and ordinary meaning of “mobile communications device” is “a portable device that can communicate while it is moving.” This construction follows directly from the ’697 patent’s specification and is confirmed by contemporaneous technical and general dictionaries.

Though the ’697 patent does not use the exact phrase “mobile communications device” in the written description, the specification uses similar terms such as “mobile apparatus” and “mobile terminal” to convey that a mobile communications device is portable and can be used while it is moving. From the outset, the ’697 patent explains that a “mobile apparatus” can experience “long ringing of an incoming call ... [that] may cause a nuisance, for example in open space office environments *or libraries*, if the mobile apparatus is left unattended.” -584 Case, Dkt. 1-1 (1:16-24). The patent further explains that “*in places like theaters or cinemas*, where the apparatus is likely in close vicinity of the user, an incoming call may cause considerable disturbance.” *Id.* (1:24-26). And to facilitate these calls, the patent explains that the “general structure” of the apparatus includes a “communication interface module,” or a “plurality” of said modules, “such as a WLAN, Bluetooth, GSM/GPRS, CDMA, WCDMA, or LTE (Long Term Evolution) radio module.” *Id.* (8:4-6, 33-45).

These passages demonstrate that a “mobile communications device” must be portable,

otherwise it could not be brought to “places like theaters or cinemas” “or libraries.” The fact that the mobile apparatus can “be in close vicinity to the user” in such places further underscores the portability of a mobile communications device. Moreover, the patent’s emphasis that the device can receive “an incoming call” when brought to these locations, *id.* (1:16-17, 21-26), establishes that the mobile communications device can communicate while moving from place to place. The radio of the communication module underscores this functionality.

The ’697 patent also explains that the mobile communications device comprises a “sensor capable of *sensing movement*” of the device itself. *Id.* (4:44-47). The patent then describes that the mobile communications device can be moved to different locations:

Based on an *indication of the apparatus 110 moving* to a direction 310, changing its direction, or both, an assumption may be made that the user 120 is nearby the apparatus 110. The user 120 may be *walking, driving a car or holding the apparatus in a moving hand*, for example.

*Id.* (4:48-52). The patent further explains:

[The] movement sensor *may determine the movement of the apparatus in relation to the environment*, or orientation of the apparatus. *Typically the user is moving also in such circumstances, for example walking or driving a car. The user may also hold the apparatus in a moving hand.* The movement sensor may be activated to *identify the possible movement of the apparatus.*

*Id.* (6:14-20). The patent also notes that the mobile communications device may include “a disposable or rechargeable battery ... for powering the apparatus when external power ... is not available.” *Id.* (9:6-9).

The fact that the mobile communications device includes a sensor that “sens[es] movement” and “determine[s] the movement” of the device makes clear that a mobile communications device is portable. Further, the patent’s repeated description of using the mobile communications device while “walking,” “driving,” or held “in a moving hand,” and its discussion of battery-powered operation, reinforces that the device is both portable and

communicates while moving from place to place.

In addition, the '697 patent expressly distinguishes “mobile terminals” from “other communication device[s].” *Id.* (7:66-8:3). “FIG. 6 presents an example block diagram of an apparatus 600 in which various embodiments of the invention may be applied. This may be a user equipment (UE), user device or apparatus, *such as a mobile terminal or other communication device.*” *Id.* Accordingly, the specification discussion of “mobile apparatus” and “mobile terminal” makes clear that the claimed “mobile communications device” is portable and can communicate while moving.

***Contemporaneous Dictionaries Confirm Google’s Construction.*** Consistent with the '697 patent specification, contemporaneous dictionaries confirm that a “mobile communications device” is “a portable device that can communicate while it is moving.” For instance, *Newton’s Telecom Dictionary* defines “mobile communications” as, “[q]uite simply, the ability to communicate while moving.” Ex. 24 at -5278. Similarly, *A Dictionary of Media and Communication* states that “mobile communications” is, “[b]roadly, any communications technology that is portable.” Ex. 25 at -5293. This dictionary further defines the term as “[a] device, network, or service that enables interpersonal communication over a distance between two or more parties: either *because the user is mobile and has access to the service in a number of different locations* or *because the technology is portable and can be carried with the user*; i.e. a walkie-talkie radio or *mobile phone.*” *Id.*

Likewise, *Wiley Electrical and Electronics Engineering Dictionary* defines the same term as “[t]he transmission of information between two or more points or entities, *one or more of which is moving or able to move easily.*” Ex. 26 at -5270. And the *IEEE 100* dictionary defines “mobile communication system” as “[c]ombinations of interrelated devices capable of

transmitting intelligence between two or more spatially separated radio stations, *one or more of which shall be mobile.*” Ex 27 at -5264. These meanings align with the definition of “mobile” from the *Wiley* dictionary: “That which can be *readily moved* from one location to another *while uninterruptedly maintaining proper operation.*” Ex. 26 at -5270.

In short, the objective, technical definitions uniformly focus on a mobile communications device’s portability and ability to communicate while moving. Accordingly, Google’s construction captures the full scope of the term’s plain and ordinary meaning.

The technical definitions dovetail with definitions of “mobile” from general dictionaries. For example, the *New Oxford American Dictionary* defines “mobile” as “able to move or be moved freely or easily.” Ex. 28 at -5289; Ex. 29 at -5283 (*The American Heritage College Dictionary*) (same); Ex. 30 at -5274 (*Merriam-Webster’s Collegiate Dictionary*) (same).

***The Prosecution History Demonstrates That A “Mobile Communication Device” Cannot Be Any Apparatus With Communication Functionality.*** The original application for the ’697 patent included claims simply reciting an “apparatus.” Ex. 31 at 21-24. After multiple rejections and an examiner interview, the examiner issued a Notice of Allowance with an amendment replacing the originally-claimed “apparatus” with “telephone” (among other changes). *Id.* at 71-73. The applicant then proposed replacing the term “telephone” with “mobile communications device.” *Id.* at 77-81.

As these amendments make clear, the prosecution-circumscribed claims specifically require a “mobile communications device” rather than any “apparatus” having communication functionality. The prosecution history “can often inform the meaning of the claim language by demonstrating ... whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Phillips v. AWH Corp.*, 415 F.3d 1303,

1317 (Fed. Cir. 2005) (en banc). Such is the case here. Through its amended complaint and contentions against the stationary and wall-mounted apparatuses, WSOU attempts to broaden the scope of the term “mobile communications device” to that of the originally claimed “apparatus,” which it disclaimed through amendment during prosecution.

\* \* \*

Google’s construction of “mobile communications device” as a “a portable device that can communicate while it is moving” fully aligns with the totality of the intrinsic evidence and represents the full scope of the term’s plain and ordinary meaning as confirmed by objective, contemporaneous dictionaries. As in *O2 Micro* and *Eon*, “plain and ordinary meaning” is insufficient given the parties’ dispute about the scope of such meaning:

Here, the court did not resolve the parties’ dispute by instructing the jury that the claims should be given their plain and ordinary meaning. During claim construction, the parties actively disputed the scope of the “portable” and “mobile” terms. The crucial question was whether, as [defendant] argued, the terms should not be construed so broadly such that they covered “fixed or stationary products that are only theoretically capable of being moved.” By determining only that the terms should be given their plain and ordinary meaning, the court left this question of claim scope unanswered, leaving it for the jury to decide. This was legal error.

*Eon*, 815 F.3d at 1319 (citing *O2 Micro*, 521 F.3d at 1362) (other citation omitted). The Court should adopt Google’s construction.

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Respectfully submitted,

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